

Abstract

A polypropylene/ethylene block copolymer, which has a poly(ethylene-co-propylene) segment content of 5 to 100 wt.%, excluding 100 wt.%, and a total ethylene content of 2 to 95 wt.%. (a) The block polymer comprises polypropylene segments and poly(ethylene-co-propylene) segments chemically bonded thereto, and (b) the polypropylene segments and the poly(ethylene-co-propylene) segments have been synthesized in the presence of an olefin polymerization catalyst comprising an organometallic compound and a solid catalyst component comprising either titanium and a halogen, or titanium, magnesium, and a halogen. The block copolymer has a weight-average molecular weight of 100,000 or higher, is suitable for producing general-purpose molded articles, and has an excellent balance among mechanical properties, impact resistance, thermal properties, transparency, moldability, and other properties.